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10/563,030	05/18/2006	Roland Steffen	01012-1035	3912

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DITTHAVONG MORI & STEINER, P.C.
918 Prince St.
Alexandria, VA 22314

EXAMINER	
AKINYEMI, AJIBOLA A	
ART UNIT	PAPER NUMBER
2618	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/563,030	STEFFEN ET AL.	
	Examiner	Art Unit	
	AJIBOLA AKINYEMI	2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 June 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-12 and 14-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-12 and 14-19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *30 December 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1, 5-7, 10-12 and 14-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weiler et al (U.S. Patent No. 5970395) and further in view of Seike (Patent No.: US 6243576B1) and Wedge (patent No.: US 5170126).

With respect to claim 1:

Weiler discloses a high-frequency measuring system for measuring a device under test (fig.4, item 15), comprising: a measuring-device unit (fig.4, item 5); and a first high-frequency module (fig.4, item 3A) including a transmitter device (col.6, lines 28-31) configured to communicate with the device under test (fig.4, item 15) and a second

high-frequency module (fig.4, item 3B) including a receiver device (col.6, lines 28-31) configured to communicate with the device under test (fig.4, item 15), wherein each high-frequency module is placed spatially separated from the measuring-device unit (fig.4, item 5) and each high-frequency module is connected to the measuring-device unit via a digital interface (fig.4, item 4) wherein the measuring-device unit (fig.4, item 5) is configured to process input data input into the measuring-device unit to form a bitstream for transmission via the digital interface to the one first high-frequency module and the first high-frequency module is configured to subsequently forward the bitstream to the device under test using the transmitter device (col.4, lines53-col.5, lines 16). Weiler did not disclose state diagram of I and Q (In phase and Quadrature).Seike discloses processing of an input data including I and Q (fig.2, col.9, lines 1-13). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have I and Q data in order to for improve quality of signal by reducing noise through proper signal conversion as well as user can customize design data by tuning input data. Weiler and Seike did not disclose one or more high frequency module to include a local oscillator and wherein the high frequency module with the local oscillator is provided in a housing that is separate from a housing of the measuring unit. Wedge disclose a system which include a transceiver that share a local oscillator (fig.3, item 58) since Weiler discloses a high frequency module including a transceiver in (fig.5, item 19, 20). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have a transceiver that includes a local oscillator as in Wedge's invention in order to generate high frequency signal.

With respect to claims 5 and 6:

Weiler further discloses the high-frequency measuring system used digital interface is an optical interface and electrical interface (see col.2 lines 33-41).

With respect to claim 7:

Weiler furthermore discloses the high-frequency measuring system comprises portable computer (15 of fig.4) i.e. device under test [frequency module] wherein supplying power independently from monitoring unit (5) through power cable (16 of fig.4) [Moreover, every receiver component essentially provided an electrical energy through power supply for its operation].

With respect to claim 10:

Weiler further discloses A high-frequency measuring system according to claim 1, wherein control data or user data is transmitted in a standardized form via the digital interface, and wherein the first high-frequency module comprises means for processing a high- frequency signal with regard to the transmission of data in standardized form via the digital interface or for processing the data transmitted in standardized form with regard to at least one predetermined transmission standard for the high-frequency signal (col.6, lines 13-53).

With respect to claim 11:

The rejection of claim 1 is incorporated; Seike further discloses a high frequency measuring system wherein the input data is manually input by one of the operating key (col.7, lines 56-61).

With respect to claim 12:

Weiler discloses a high-frequency measuring system for measuring a device under test (fig.4, item 15), comprising a measuring-device unit (fig.4, item 5) for receiving input data from a user and a first high-frequency module (fig.4, item 3A) including a transmitter device (col.6, lines 28-31) configured to communicate with the device under test (fig.4, item 15) and a second high-frequency module (fig.4, item 3B) including a receiver device (col.6, lines 28-31) configured to communicate with the device under test, wherein each high-frequency module (fig.4, item 3A....3N) is placed spatially separated from the measuring-device unit (fig.4, item 5) and each high-frequency module is connected to the measuring-device unit via a digital interface (fig.4, item 4) wherein the receiver device is configured to receive a message comprising a high-frequency signal originating from the device under test (fig.4 is showing that item 3A...3N is communicating with device under test item 15), the second high-frequency module (fig.4, item 3B) being configured to process the high- frequency signal to form a first bitstream for transmission via the digital interface (fig.4, item 4) to the measuring-device unit (fig.4, item 5) wherein in the measuring-device unit is configured to process the input data to form a second bitstream for transmission via the digital interface to the one first high-frequency module (fig.4, item 3A...3N) and the first high-frequency module (fig.4, item 3A) is configured to subsequently forwarded forward the second

bitstream to the device under test (fig.4, item 15) using the transmitter device (col.6, lines 28-31). Weiler did not disclose converting the high-frequency signal to an intermediate-frequency signal and digitizing the intermediate-frequency signal for transmission via the digital interface to the measuring-device unit for evaluation of the message. Seike discloses high frequency module whereby high frequency signal is being converted into intermediate frequency and digitizing the intermediate-frequency signal for transmission (fig. 2, input RF/IF section goes to item 60). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have intermediate frequency in order to improve quality of signal by reducing noise through proper signal conversion. Weiler and Seike did not disclose one or more high frequency module to include a local oscillator and wherein the high frequency module with the local oscillator is provided in a housing that is separate from a housing of the measuring unit. Wedge disclose a system which include a transceiver that share a local oscillator (fig.3, item 58) since Weiler discloses a high frequency module including a transceiver in (fig.5, item 19, 20). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have a transceiver that includes a local oscillator as in Wedge's invention in order to generate high frequency signal.

With respect to claims 14:

The rejection of claim 12 is incorporated; Wedge further discloses a high-frequency measuring system wherein the conversion of the high-frequency signal to an

intermediate-frequency signal includes receiving the high-frequency signal at the receiver device and subsequently mixing the high- frequency signal with a signal generated by the local oscillator which is included as part of the second high frequency module (fig. 3).

With respect to claims 15:

Seike further discloses high-frequency measuring system wherein the intermediate-frequency signal is subdivided into an in-phase branch and a quadrature-phase branch and mixed in the in-phase branch with a signal generated by a second local oscillator (fig.15A).

With respect to claim 16:

Weiler discloses a method for testing a device under test comprising receiving input data from a user using measuring device unit (fig.4, item 5); forming based on the input data a first bitstream for transmission via a digital interface (fig.4, item 4) to a first high-frequency module (fig.4, item 3A), the first high-frequency module including a transmitter (fig.5, item 19) configured to communicate with the device under test (fig.4, item 15) to subsequently forward the first bitstream to the device under test (fig.4, item 15); receiving a second bitstream representative of high-frequency signal messages originating from the device under test (fig.4, item 15) via a second high-frequency module (fig.4, item 3B) including a receiver (fig.5, item 20) configured to communicate with the device under test (fig.4, item 15), the second high-frequency module processing the high-frequency signal messages to form the second bitstream, the

processing, by the second high-frequency module, including converting the high-frequency signal messages to intermediate-frequency signals and digitizing the intermediate-frequency signals. Weiler did not disclose state diagram of I and Q (In phase and Quadrature) and converting the high-frequency signal to an intermediate-frequency signal and digitizing the intermediate-frequency signal. Seike discloses processing of an input data including I and Q (fig.2, col.9, lines 1-13) and converting the high-frequency signal to an intermediate-frequency signal and digitizing the intermediate-frequency signal (fig. 2, input RF/IF section goes to item 60). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have I and Q data and converting the high-frequency signal to an intermediate-frequency signal in order to for improve quality of signal by reducing noise through proper signal conversion as well as user can customize design data by tuning input data. Weiler and Seike did not disclose one or more high frequency module to include a local oscillator and wherein the high frequency module with the local oscillator is provided in a housing that is separate from a housing of the measuring unit. Wedge disclose a system which include a transceiver that share a local oscillator (fig.3, item 58) since Weiler discloses a high frequency module including a transceiver in (fig.5, item 19, 20). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have a transceiver that includes a local oscillator as in Wedge's invention in order to generate high frequency signal.

With respect to claim 17:

Weiler further discloses to determine a specific bit sequence to be transmitted to the computer (15 of fig.4) i.e. device under test (see fig.4).

With respect to claim 18:

Weiler further discloses to generate one or more control signals in the bit sequence by the scanned controller to control the one high- frequency module (3 of fig.4) (see fig. 5 and col.5 lines 10-32).

With respect to claim 19:

The rejection of claim 16 is incorporated; Seike further discloses a method wherein the input data is input by the user using one of the operating keys (fig.1B).

4. Claim(s) 3, 4, 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weiler as modified by Seike as applied to claim 1 above and further in view of Agilent PNA Network Analyzers (NPL documents: priority date September 25,2002).

With respect to claims 3, 4, 8 and 9:

The rejection of claim 1 is incorporated; Weiler and Seike do not disclose explicitly that interface is serial and parallel (although, it is an obvious for any test measurement/network analyzers ports have been provided serial or parallel interface). However, Standard documents of Agilent PNA Network Analyzers (RF and microwave

frequency measurement device wherein high RF frequency, antenna measurement and frequency calibration performed by network analyzers) teaches connectivity of network analyzers uses variety (i.e. multiple ports) input/output interfaces including universal serial bus, LAN and parallel connections; and plurality of ports can be seen both side of front view of the analyzers are identical; and plurality of different ports are used in the network analyzers (measurement devices) for digital interface(see all figures @ page 8 standard features). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have interface in serial and parallel pattern which are some identical and some are different ports for using interface as taught by standard documents of Agilent PNA Network Analyzers to obtain more clear signal, error free to use probe for connection (since some ports are identical) and good adaptability (using digital interface) of the measuring devices.

Response to Arguments

3. Applicant's arguments with respect to claims1, 12 and 16 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to AJIBOLA AKINYEMI whose telephone number is (571)270-1846. The examiner can normally be reached on monday- friday (8.30-5pm) Est.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, YUWEN PAN can be reached on (571) 272-7855. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AA
/Yuwen Pan/
Primary Examiner, Art Unit 2618